Evaluation results: Testing communication channels to connect residents to Train for Jobs SA

Results from a communications trial conducted by the Behavioral Insights Team and the City of of San Antonio

June 29, 2021

THE BEHAVIORAL INSIGHTS TEAM

This work was supported by Bloomberg Philanthropies as part of the What Works Cities Initiative

Executive summary

Context

- **We evaluated the effectiveness of two communication channels** —text message vs. postcard—**to encourage residents to apply to a jobs training program**, Train for Jobs SA.
- We **contacted over 30,000 applicants to the COVID-19 Emergency Housing Assistance** (EHAP) who were likely to have experienced job and/or income loss due to the pandemic.

Results

- **92 households—less than 1% of our sample—called 311** between April 26th and June 4th after receiving our communication to apply for Train for Jobs SA.
- **Text messages were a significantly more effective (and cost-effective)** way to encourage residents to call about Train Jobs for SA.
  - Households who received a postcard were 50% less likely to call 311.
  - The cost per call for Text Messages was $18.86 vs to $220.31 for Postcards.
- Results within subgroups (gender, race, ethnicity) mirrored the overall results.

Recommendations

- EDD should **use text message based outreach to recruit applicants** for Train for Jobs SA
- Before investing much more in advertising the training program, **reach out to EHAP applicants and/or other residents to learn more about barriers to enrolling**.

Background & Context

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BIT works with cities to help improve outcomes for residents

- We've worked with **55 U.S. cities** (and counting) to launch **over 100 evaluations**.

- We help our clients to:
  - **Apply learnings** from behavioral science;
  - **Design interventions** that tackle their challenges;
  - **Evaluate** the results.

Our work with the City of San Antonio (1/2)

- San Antonio's Economic Development Department (EDD) launched a jobs program, Train for Jobs SA, intended for people in industries who have been disproportionately impacted by the COVID-19 pandemic (e.g. retail, food service, hospitality).
    - The program had significant excess capacity as of October 2020, which EDD staff believed was because people did not know about the program.
- The City and the Behavioral Insights Team (BIT) conducted a Randomized Controlled Trial to learn which communication channel would generate more interest in Train for Jobs SA.
    - We contacted applicants to the COVID-19 Emergency Housing Assistance (EHAP) who were likely to have experienced job and/or income loss due to the pandemic.
    - Further, the City wanted to better understand which communication methods are most effective to reach low-income residents to inform the design of their "City Hall To Go" pilot to bring municipal services closer to residents.

Our work with the City of San Antonio (2/2)

- From April 26 - May 14, 2021, the City sent 29,831 households one of two communications about Train for Jobs SA—a text message or a postcard—to invite them to apply for the program.
- This deck provides (1) **Methods**, (2) **Results**, (3) **Recommendations**, and (4) **Appendix**.

BIT's TESTS framework guided project approach

	September 2020 - March 2021			April - June 2021	June 2021 →
	Target	**Explore**	**Solution**	**Trial**	**Scale**
Key activities	• Define the behavioral problem • Identify SMART outcomes	• Research the behavioral context and barriers	• Draw on behavioral science to design the intervention(s)	• Plan trial • Launch trial • Analyze results	• Implement intervention and learnings more broadly
Key outputs	• Weekly project meetings with BIT and Innovation team to identify focus for evaluation	• 45 minute interviews with 8 city departments • Attended virtual R&D league conference	• Partnered with EDD and GPA • Drafted and designed text message and postcard	• Cleaned contact information in EHAP • Wrote trial protocol (pre-analysis plan) • Analyzed data • Drafted results deck	• BIT and Innovation team debriefed next steps based on trial findings

Methods

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Overview of our approach

Our sample was **29,831 households** in the City of San Antonio who applied to the Covid-19 Emergency Housing Assistance Program*

Households were **randomly assigned** to receive one of two communications (text message or postcard).

Households with a Spanish-preferring applicant and households with a Black applicant were divided equally between the 2 communications

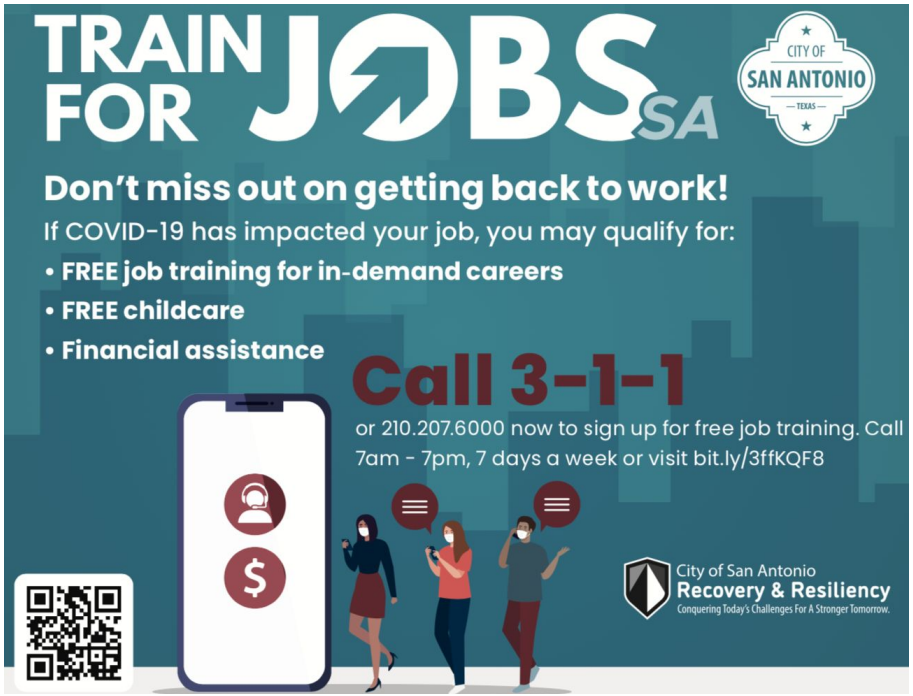
3 weeks after the last batch of communications was sent, we measured who **called 311 to be referred to Train for Jobs SA** and **clicked on the link for more information** about Train for Jobs SA

We **analyzed the results** to identify the most effective communication channel overall and for subgroups of interest

We excluded callers that did not match anyone in our EHAP sample

*Our sample included residents who applied to the Covid-19 Emergency Housing Assistance Program (EHAP) by March 19th, 2021.

Households in the postcard group received the postcard below, translated in English and Spanish

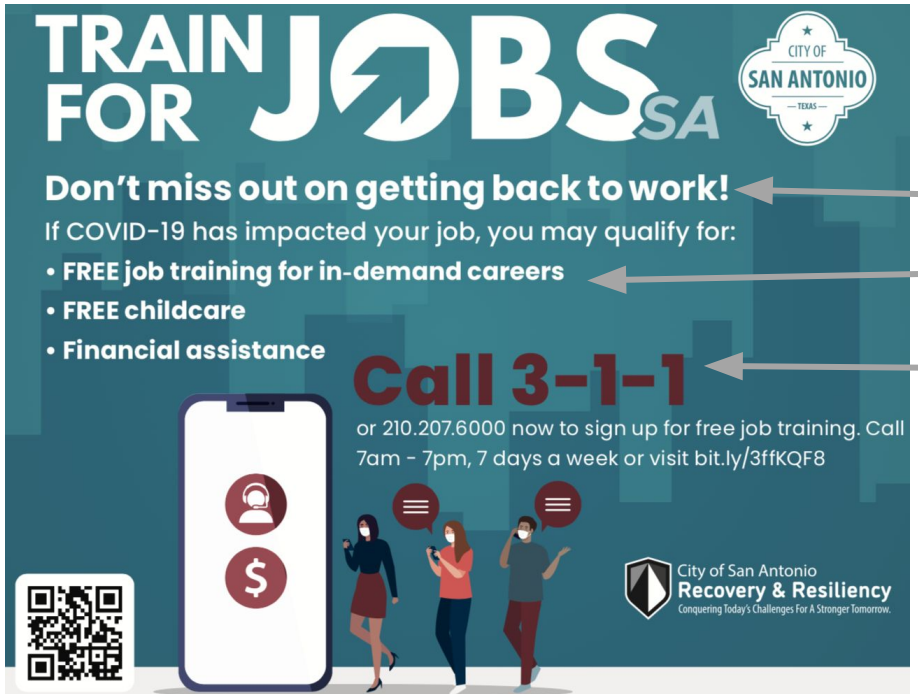


Front of postcard

Space left blank for mailing address

Back of postcard

Postcard used behavioral insights principles: loss aversion, salience, and clear call-to-action



Loss aversion

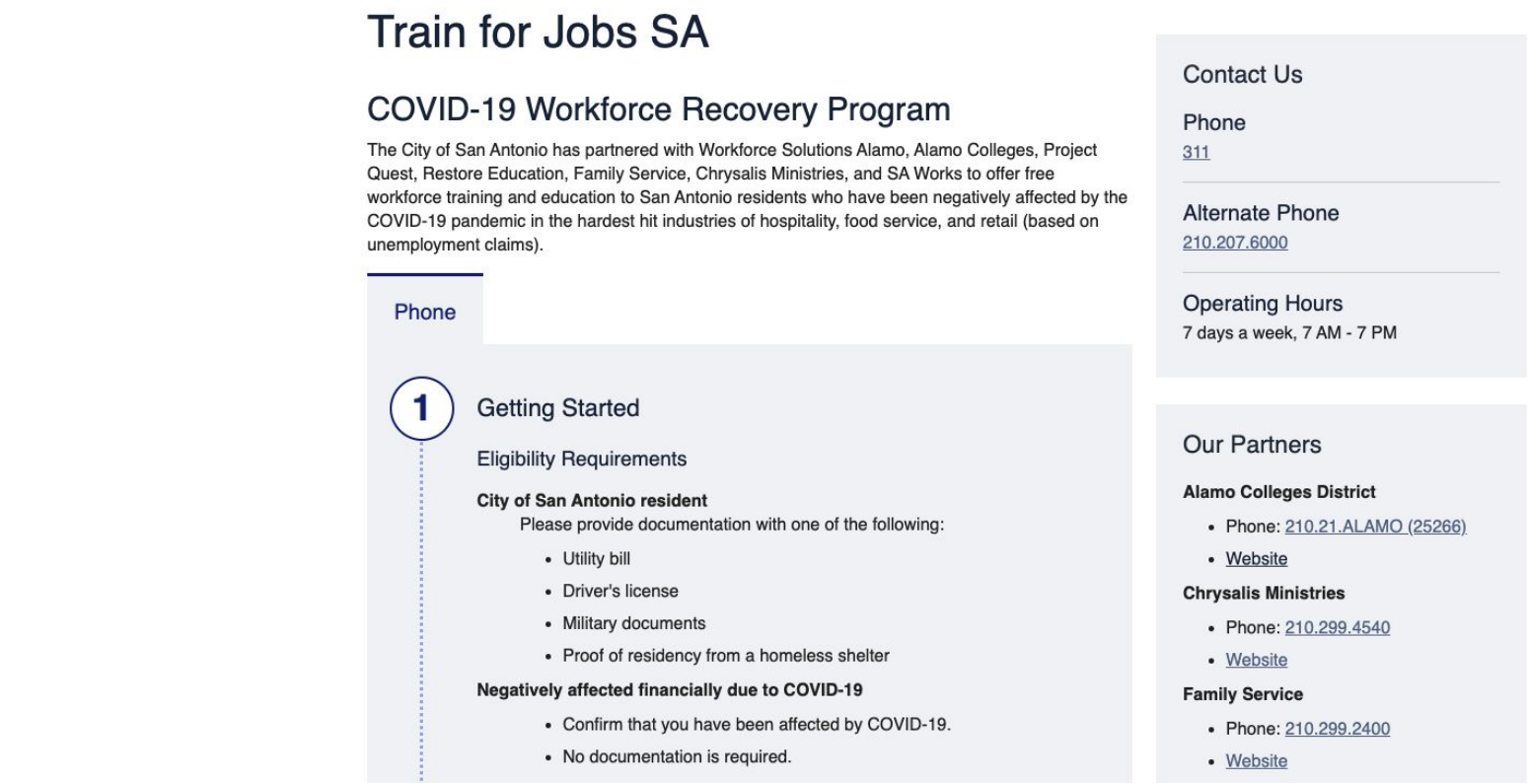
Making benefits salient

Clear call-to-action

Households in the text message group received the text below, translated in English and Spanish

- We sent a text message to each phone number associated with a particular household
    - 4% of households received more than one text message
- The text message used the same behavioral insights principles as the postcard, with abbreviated text
    - Loss aversion: “Don’t miss out”
    - Salient benefits: “Free childcare”
    - Clear, call-to-action: “Call / Llame 311”

In both communications, the bit.ly link & QR code directed households to the Train for Jobs webpage



Train for Jobs SA

COVID-19 Workforce Recovery Program

The City of San Antonio has partnered with Workforce Solutions Alamo, Alamo Colleges, Project Quest, Restore Education, Family Service, Chrysalis Ministries, and SA Works to offer free workforce training and education to San Antonio residents who have been negatively affected by the COVID-19 pandemic in the hardest hit industries of hospitality, food service, and retail (based on unemployment claims).

Phone

1 Getting Started

Eligibility Requirements

City of San Antonio resident

Please provide documentation with one of the following:

- Utility bill
- Driver's license
- Military documents
- Proof of residency from a homeless shelter

Negatively affected financially due to COVID-19

- Confirm that you have been affected by COVID-19.
- No documentation is required.

Contact Us

Phone
311

Alternate Phone
210.207.6000

Operating Hours
7 days a week, 7 AM - 7 PM

Our Partners

Alamo Colleges District

- Phone: 210.21.ALAMO (25266)
- Website

Chrysalis Ministries

- Phone: 210.299.4540
- Website

Family Service

- Phone: 210.299.2400
- Website

Results: Overall

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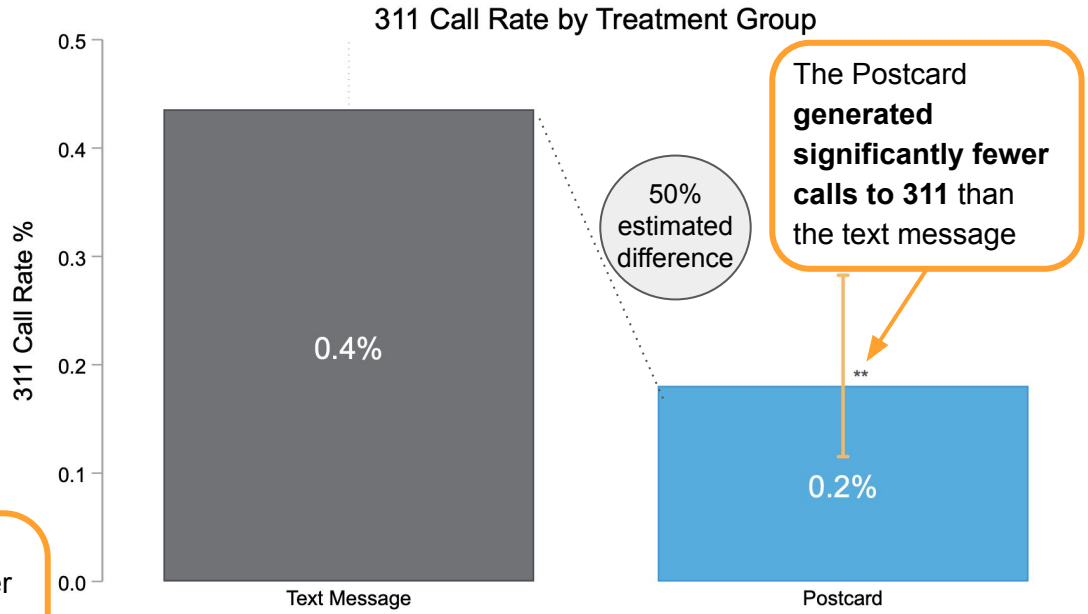
Overall there were few calls made to 311, with an especially high cost-per-call in the postcard arm

- Across both the postcard and text message groups, only **92 households (<1%) in our sample called 311** to sign up for the Train for Jobs SA program after receiving their communication April 26th - June 4th
  - 117 additional people called during this time frame, but could not be matched to our sample
- With this response rate, the City spent $77.35 to generate each 311 call*
  - Postcards were much more expensive to mail ($0.40 per postcard) than text messages were to send ($0.08 per text message)
  - The cost to “generate” a 311 call in the text message condition was $18.86 versus $220.31 in the postcard condition

*The costs of the postcard and SMS were paid for by the COSA Economic Development Department

Residents who received a text message were twice as likely to call about Train for Jobs SA (vs. postcard)

- Across both communications, just **92 households (0.3% of our sample) called 311** to sign up for the Train for Jobs SA program
- **Significantly fewer households called 311 if they received the postcard** (0.2% v. 0.4% text message)
- Had each household re… text message, we esti… 128 calls (36 more) w… been made to 311



P-values help us understand whether the difference between messages could be due to chance.

Behavioral science theory and evidence suggests potential reasons why the text message outperformed the postcard

Salience	• The text message was delivered directly to the EHAP applicant and people are very likely to open/read a text. ○ SMS messages have high open rates (compared to email and direct mailings). SMS platforms estimate text messages have an average 82% open rate.
Simplification/ cognitive load	• Both communications were direct and short, but the text message necessarily had fewer words. The text message may have been more skimmable and/or easier to digest for people in our sample which has been shown to boost engagement in other behavioral science interventions.
Reduced friction costs	• Households that received a text message could directly click on a link for more information about the opportunity (vs. scanning a QR code or typing the bit.ly link). • Since the next step to enroll in Train for Jobs SA was to call 311, it could have been beneficial to receive the information to your phone. ○ Households in the text message group were quicker to call 311. In fact, 25 called on the day they were sent the text message (vs. 5 people who called within 2 days of the postcard being sent). However, the median amount of time to call 311 was 4 days after receiving a text message (vs. 14 days for households that were sent postcards).

Text messages looked to be more effective to target specific people than postcards

- We matched EHAP households to call data from 311 to based on the contact information they shared in both applications.
    - For analyses reported in this deck, we counted households as a 311 call if they matched on name, address, or phone number; sensitivity analyses showed that results were similar if we only counted households that matched on all 3 identifiers

- Both text messages and postcards appear to have been received by people outside of our original sample; however, we believe text messages were more effective at reaching the specific people in the EHAP data.
    - Among callers, 61% of people who were sent a text message matched the full name, mailing address, and phone number of someone in our original sample, whereas only 29% of callers who were sent a postcard matched that way.*

- This appeared to be due to incomplete addresses (e.g. missing an apartment number within a large apartment complex) and household mobility (e.g. households moving to a new address)
    - Future mailings could be mailed to residents by name and include a return-to-sender address to estimate how frequently this occurs
    - Postcards may be easier to share with others who weren't applicants (e.g., hand it to a friend)

**Based on BIT treatment assignment (as opposed to self-reported data about how a resident heard about the program to 311)*

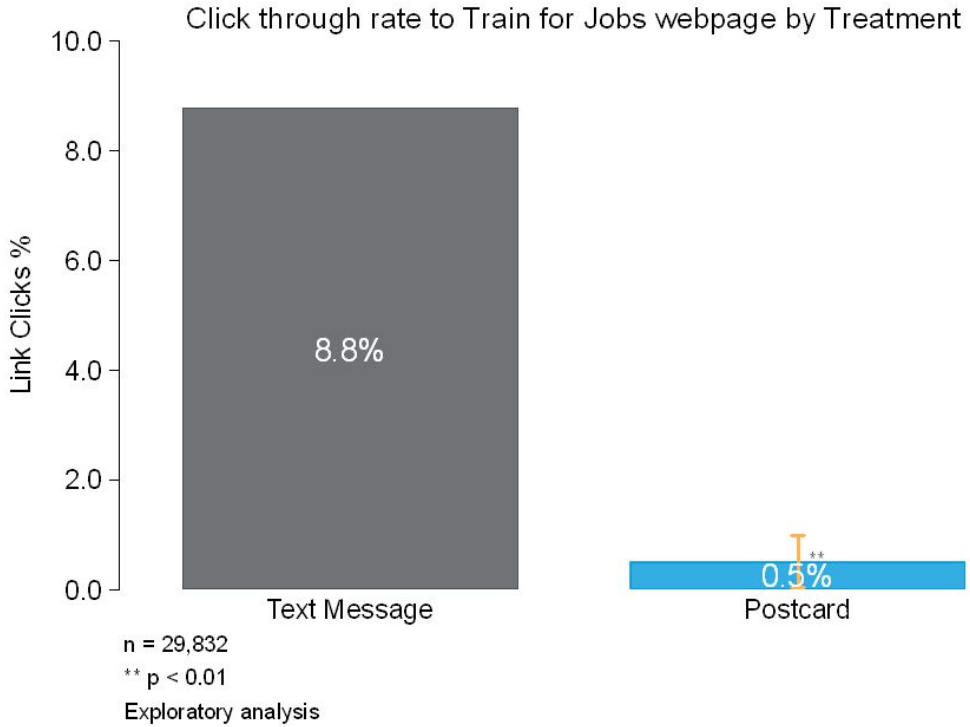
There are several potential reasons overall 311 calls might have been low

- Awareness about the program and its benefits (e.g., free childcare) might not have been the main barrier to enrollment in Jobs for SA
  - EDD hypothesized that lack of awareness was driving excess capacity in the program
- If awareness was not the primary barrier, perhaps the offer was not compelling enough to get them to enroll
  - Program description and benefits of participating might not have been clear
  - Alternatively, the offer wasn't convincing enough for people learning about it for the first time
- The population may not have needed the jobs training at the time or have been reluctant to jump into a new program at this time
  - Economy was recovering (the unemployment rate decreased 0.5% between March and April)[1]
- Having to call (vs. enroll online) can be a barrier in itself
  - For populations without access to the internet; however, phone calls could still be a preferred option

1 https://www.bls.gov/regions/southwest/tx_sanantonio_msa.htm

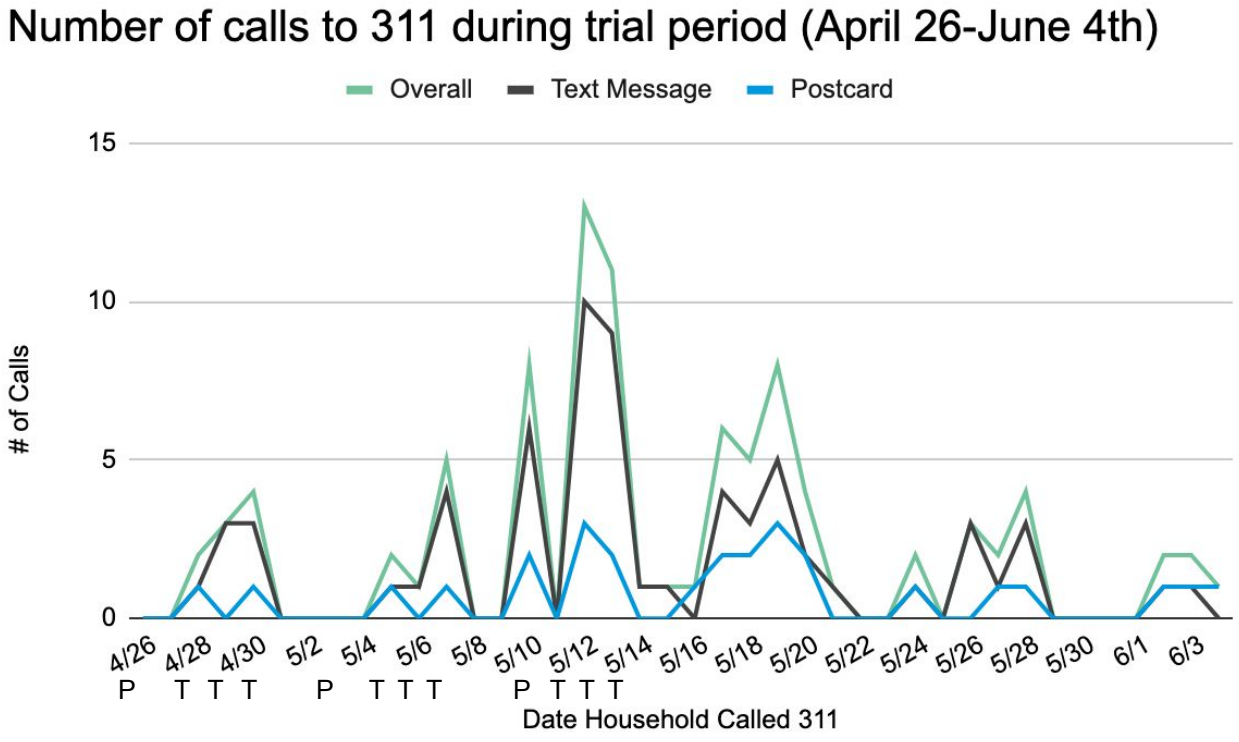
The text messages generated 17 times more click throughs to the Train for Jobs webpage

- We generated a total of **1,386 link clicks (4.7% click rate)**
  - 1,310 link clicks from SMS
  - 76 link clicks from postcards
- Note: Click rate might be overestimated because we used the total number of clicks (rather than total number of households that clicked)
  - For postcards, the click couldn't be linked back to a specific household
  - A household might have clicked on the link multiple times



Calls trickled in throughout the trial, peaking in the last week that communications were sent

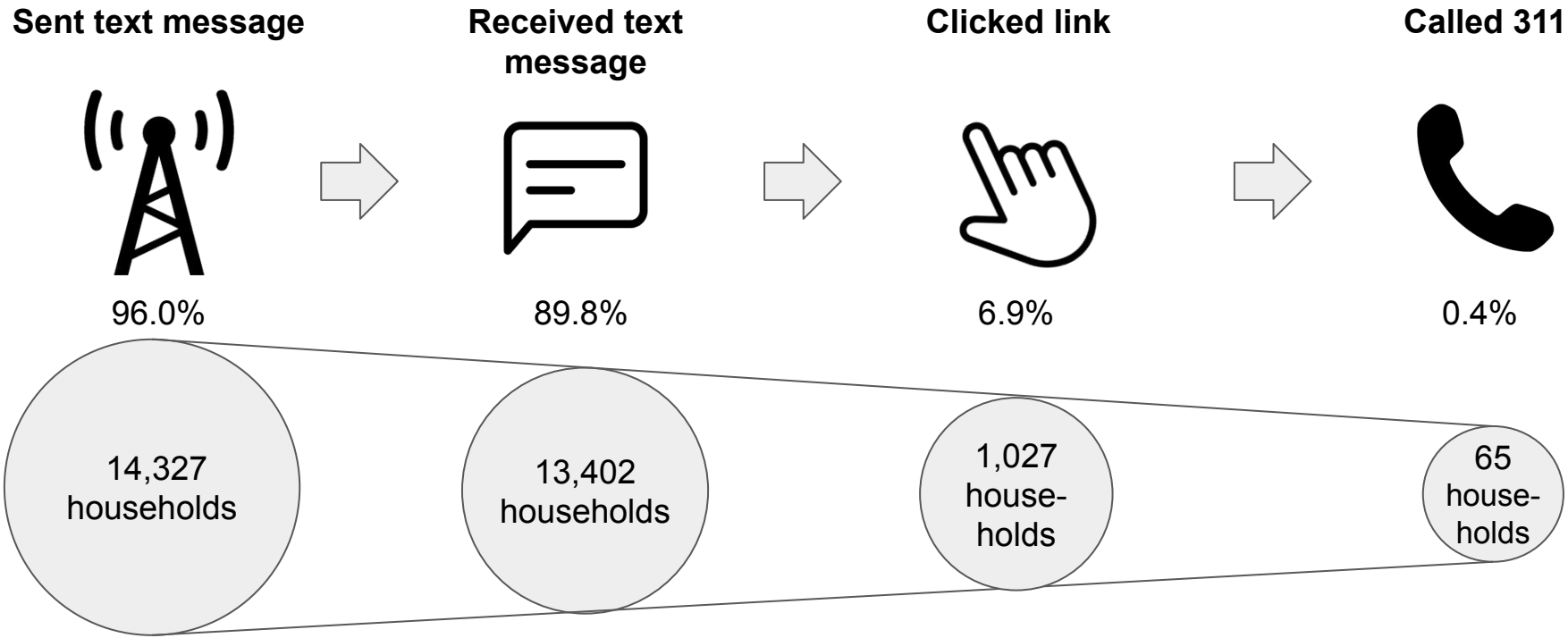
- Calls to 311 increased on the days that text messages were sent (and when postcards were likely received). *A full schedule is included in the appendix*
- There was lag time between when a communication was sent and when households called 311: a median 4 days for households that were sent text messages vs. 14 days for postcard households.



Key
P = date postcard sent T = date text message sent

Many households were lost along the journey

Text message group sample (n=14,918)

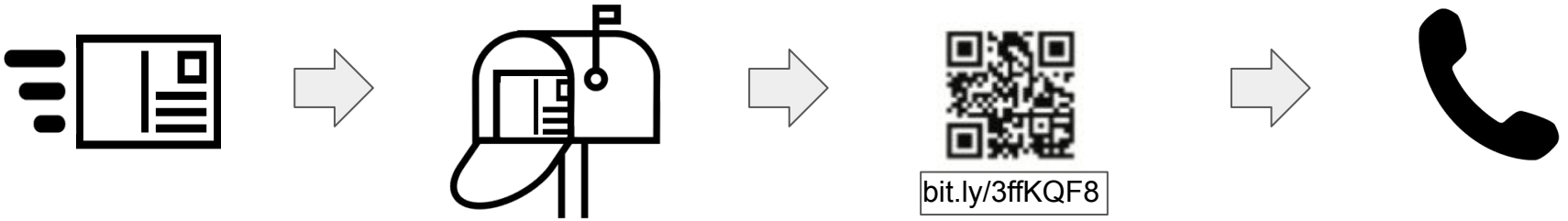


Note: Only households with at least one valid number (according to Trumpia) were sent text messages, which is why this number is less than 100%. The click-through rate represents unique households that clicked, not total clicks.

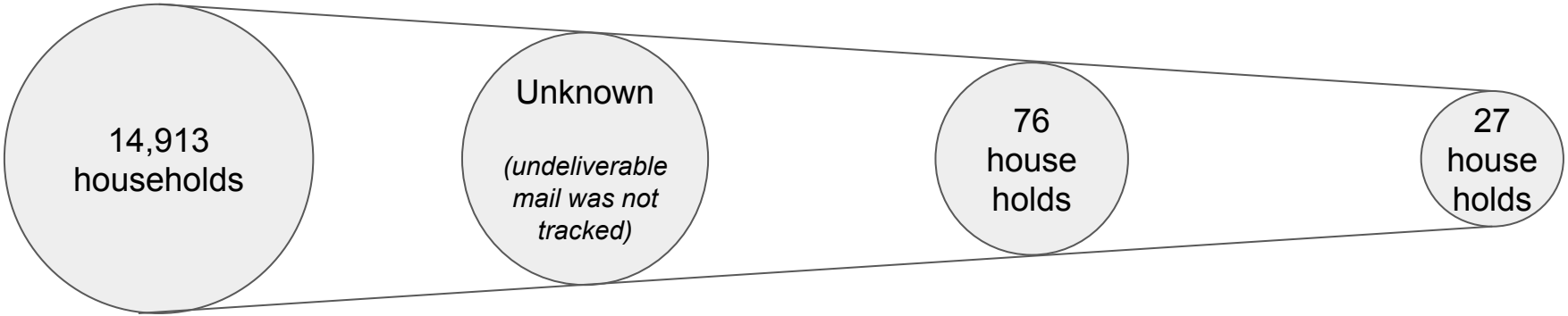
There was less ability to track the postcards

Postcard group sample (n=14,913)

Sent postcard | **Received postcard** | **Visited link** | **Called 311**



100% | 0.5% | 0.2%



Results: Subgroup analyses

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Summary of subgroup results

- **We conducted subgroup analysis at the household level** for three demographic groups of interest: female, Hispanic, and Black residents.
    - Most households (88%) only had one applicant. For households with multiple applicants, we identified “Female households” as those who had at least one female household member apply for EHAP; “Hispanic households” as those who had at least one Hispanic household member apply for EHAP; and “Black households” as those who had at least one Black household member apply for EHAP.
- Results among each subgroup were similar to the results seen for the overall sample: **The text message generated significantly more 311 calls than the postcard.**
- Just 2 households (0.11%) who preferred Spanish-language communications called 311. Because of that, we did not conduct subgroup analysis by language preference.

Summary of sample demographics: EHAP households who were sent a postcard or text and 311 callers

		EHAP households who were sent a postcard or text (n=29,831)	Households that called 311 (n=92)
Gender	At least one female applicant	70%	80%
	Male applicants only	30%	20%
Ethnicity	At least one Hispanic applicant	69%	63%
	Non-Hispanic applicants only	27%	34%
Race	At least one Black applicant	18%	37%
	At least one White applicant (and no Black applicants)	62%	45%
	Other race applicants only	13%	16%
Age (only for households with one applicant)	18-24	12%	14%
	25-34	38%	35%
	35-44	29%	29%
	45-55	21%	22%

For age, there were n=27,888 EHAP households with only one applicant, n=69 households with only one applicant called 311

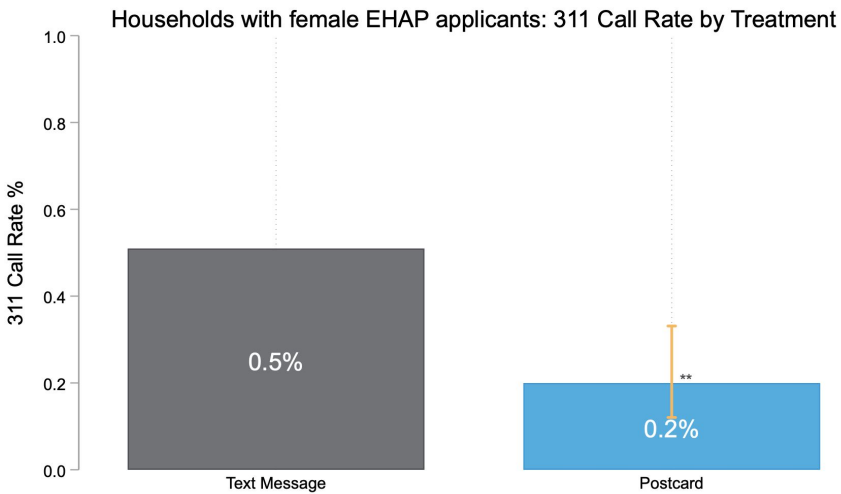
Descriptive results: Percent of households in each age group that called 311 by treatment arm

Age (n)	Text Message (n=13,931)	Postcard (n=13,957)
18-24 y (n=3,404)	0.3%	0.3%
25-34 y (n=10,588)	0.4%	0.1%
35-44 y (n=8,140)	0.4%	0.1%
45-55 y (n=5,756)	0.4%	0.1%

These descriptive results only include households with one applicant

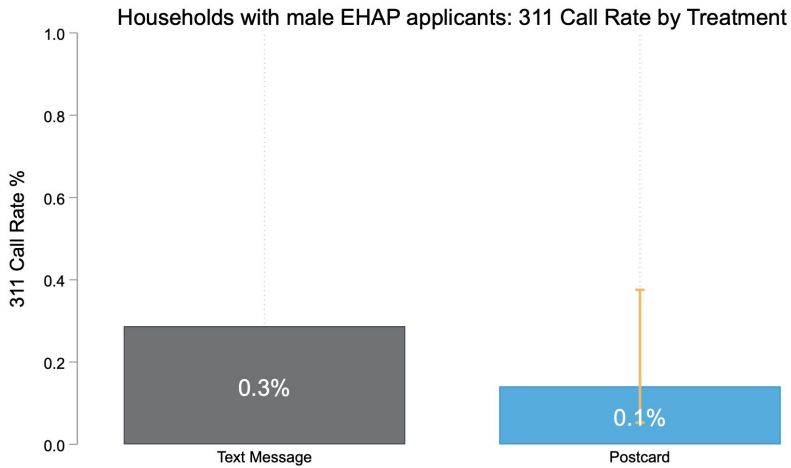
The text message was more effective for HHs w/ female applicants, no significant difference for male HHs

Female households: Call rates were higher among those who received text message



n = 20,761
** p < 0.01
Exploratory analysis, adjusted for race and language preference

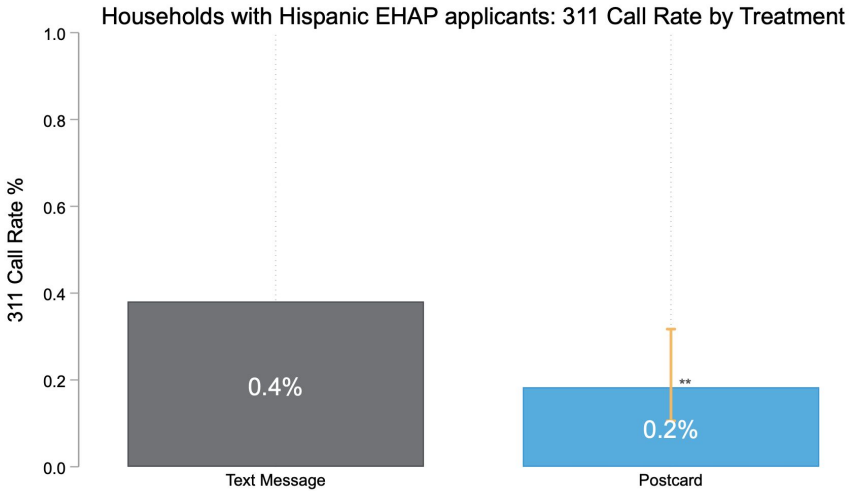
Male households: Call rates were descriptively higher among those who received text message, but not significant



n = 8,420
** p < 0.01
Exploratory analysis, adjusted for race and language preference

The text message was more effective for HHs w/ Hispanic applicants and HHs w/ non-Hispanic applicants

Hispanic households: Call rates were higher among those who received text message

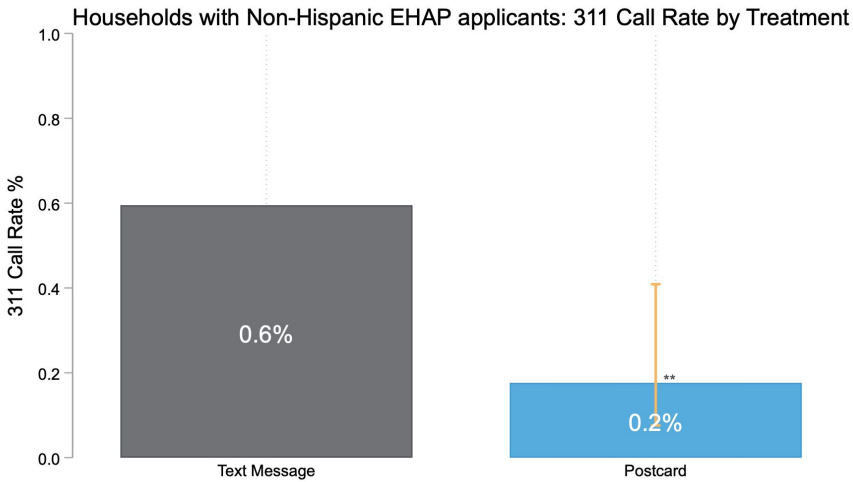


n = 20,572

** p < 0.01

Exploratory analysis, adjusted for race and language preference

Non-hispanic households: Call rates were higher among those who received text message



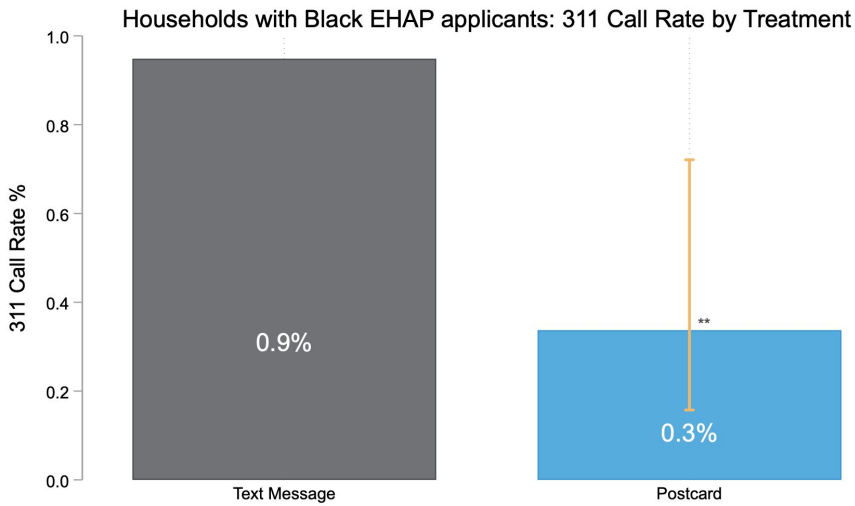
n = 7,999

** p < 0.01

Exploratory analysis, adjusted for race and language preference

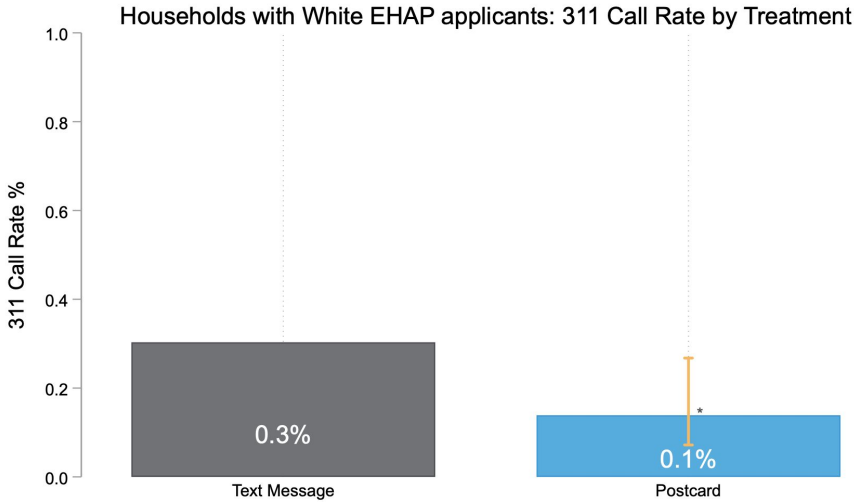
The text message was more effective for HHs w/ Black applicants and HHs w/ White applicants

Black households: Call rates were higher among those who received text message, and descriptively the highest rate of all subgroups



n = 5,300
** p < 0.01
Exploratory analysis, adjusted for language preference

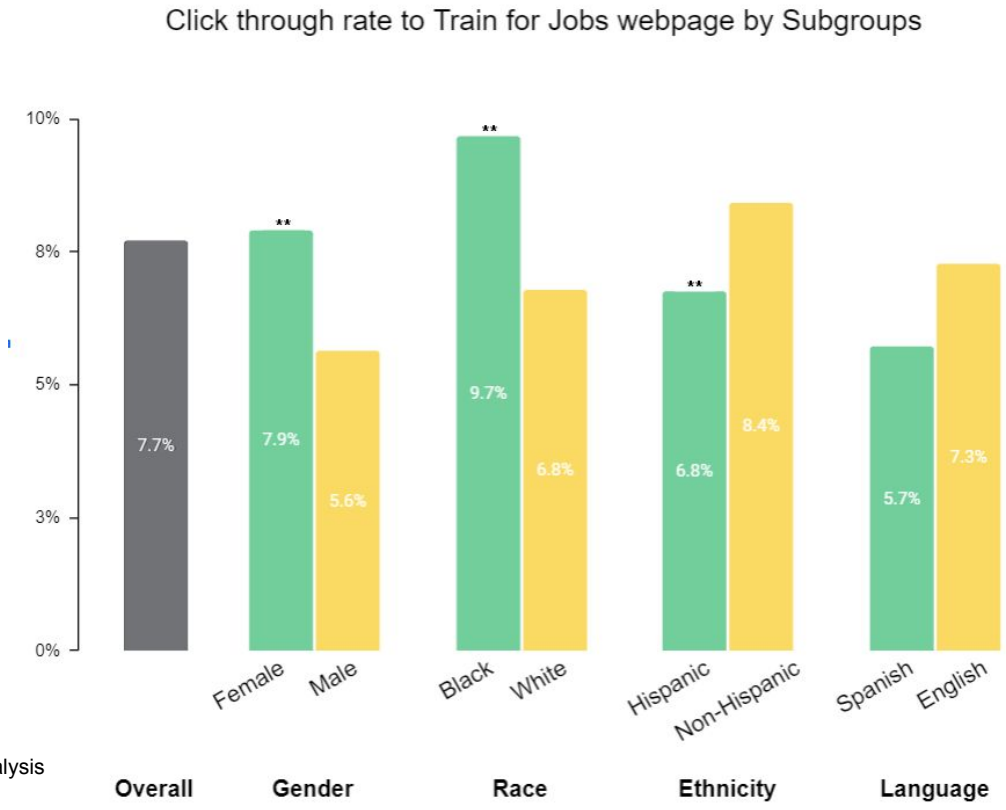
White households: Call rates were higher among those who received text message



n = 18,606
** p < 0.01
Exploratory analysis, adjusted for language preference

Note: There were households that had no White or Black applicants and were therefore not included in this subgroup analysis

There were differences in click through rate by gender, race, and ethnicity among residents sent text messages



n = 16,233
** p<.01
Exploratory analysis

Recommendations

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Summary of recommendations

1. EDD should use text messages to recruit applicants for Train for Jobs SA

2. Investigate barriers to applying Train for Jobs SA through additional research, such as a short survey

3. COSA could conduct further tests to refine text message outreach about Train for Jobs SA

4. Track longer-term participant outcomes from Train for Jobs SA

1. EDD should use text messages to recruit applicants for Train for Jobs SA

- Text messages are a more effective (and cost-effective) way to encourage enrollment in Jobs for SA
  - Text messages generated significantly more—nearly 3x more—calls to 311 than postcards.
  - Further, the cost to generate each call to 311 was 10x less for SMS than for postcards.
- When residents have have shared multiple forms of contact information with the city, our findings suggest that text messages are a superior channel to reach them (compared to direct mailings).
- In the long-term, consider the program value to the city and residents.
  - Jobs training creates many potential benefits (e.g. higher earnings, reduced demand for financial assistance).
  - If the return on investment exceeds the cost to send postcards, then postcards could still be cost-effective to reach residents who did not share mobile (or e-mail) contact information.

2. Investigate barriers to applying Train for Jobs SA through additional research, such as a short survey

- We contacted San Antonio residents that were significantly impacted by the Covid-19 pandemic, a population that likely has unmet needs.
- A one-time text or postcard advertisement for the program was not enough to overcome barriers to starting the process of enrolling.
- EDD should ask eligible residents directly what their barriers are to access additional job training: e.g., Lack of interest or trust? Confusion about program time commitment or other requirements? Unclear benefits?
    - As a next step, EDD could send a one question SMS or email survey to EHAP applicants to ask if they are still looking for work.
    - For those who are, an additional question could ask about what support/resources they need or the main barrier to sign up for jobs training.

3. COSA could conduct further tests to refine outreach and application for Train for Jobs SA

- Text message A/B test to highlight different program benefits
  - If resident feedback identifies certain program benefits that are more appealing, COSA could test the effectiveness of different text messages emphasizing those aspects.
  - For example, one message could highlight the free childcare and financial assistance while another could highlight projected future earnings and specific skills taught in the program.

- Phone call referral vs. online application to apply for Train for Jobs
  - The current requirement for residents to call 311 for a referral to the Train for Jobs program could be a barrier for interested individuals to begin the application process
    - The call to 311 introduces potential *friction costs*—small, seemingly minor steps that can make a task feel more effortful (e.g., calling during certain times, speaking to a person)
  - If it is possible to host the application online, COSA could test the impact of routing eligible residents to call 311 or to an online form for a referral to the program.
    - This could elucidate the value of having the additional option to use an online application as the option to call 311 would remain important for residents with limited internet access

4. Track longer-term participant outcomes from Train for Jobs SA

- Our trial captures the number of *referrals* that 311 made for EHAP households from April 26th - June 4th, 2021.
- We recommend that COSA track the proportion of clients who enrolled, started, and hopefully completed the training program.
- If there is a large drop off between referrals and these other metrics, then EDD may want to reevaluate the cost-effectiveness of SMS and postcard outreach. EDD might decide to increase (and reallocate) resources to bolster program completion for applicants that do enroll.

Questions?

Appendix

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Behavioral science behind our outreach

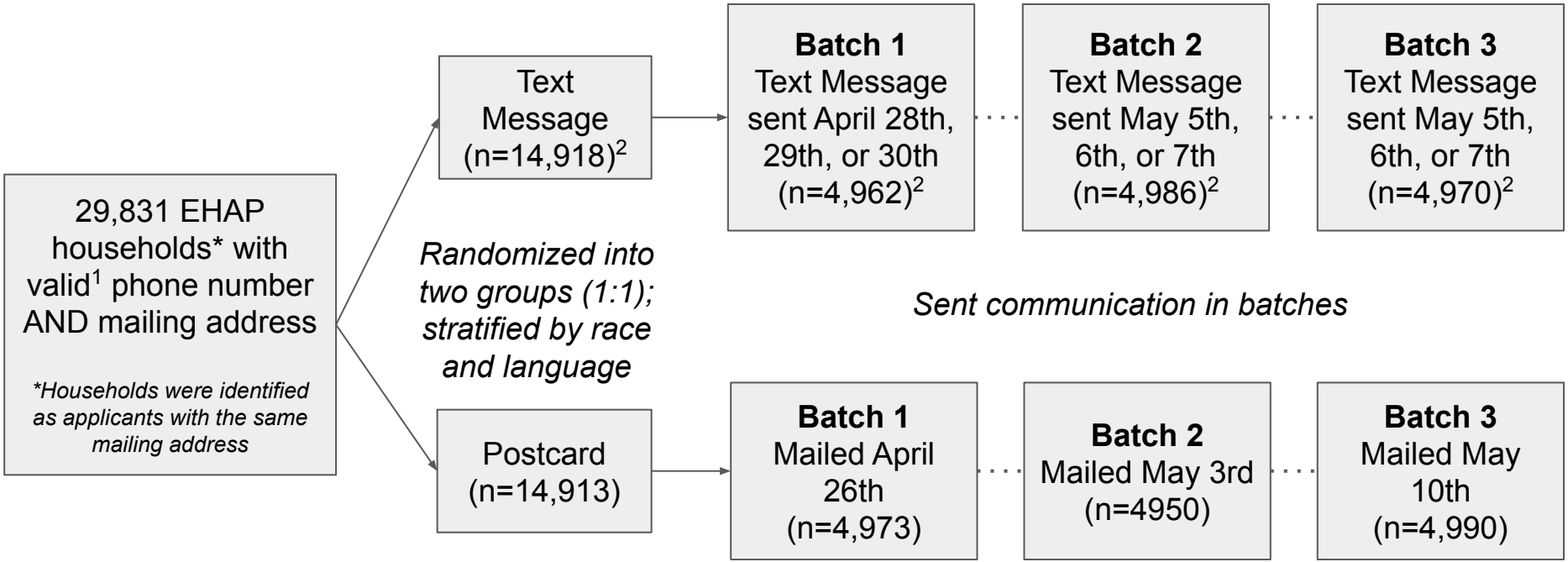
Loss Aversion	People tend to dislike losses more than they like gains,[1] which is why we used the frame of what they could be losing by not following up i.e. “Don’t miss out on getting back to work!”.
Salience	People are more likely to do something when our attention is drawn towards it.[2] We capitalized key words such as “FREE job training” to quickly capture people’s attention.
Friction costs	Small, seemingly minor steps can make a task feel more effortful and have a disportionate impact on whether that task is completed.[3] For example, people are more likely to complete online actions when the steps required are reduced.[4] We made it easy to reach the COSA webpage by including bit.ly links and a QR code on the communications.
Simplification	People are more likely to act on a message if it is easy to understand.[3] We developed a clear call to action, “Call 311 now” to indicate what action recipients should take next.

[1] Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent mode. *The Quarterly Journal of Economics, 106*(4), 1039-1061.
[2] Kahneman D (2011), *Thinking, Fast and Slow.* Penguin
[3] Behavioural Insights Team (2014). EAST: Four Simple Ways to Apply Behavioural Insights.
[4] Rosenkranz, S., Vringer, K., Dirkmaat, T., van den Broek, E., Abeelen, C., & Travaille, A. (2017). Using behavioral insights to make firms more energy efficient: A field experiment on the effects of improved communication. Energy Policy, 108, 184–193. doi:10.1016/j.enpol.2017.05.056.

Communications were sent in three batches to avoid overwhelming 311 call center capacity

Batch	Postcard sent (Monday)	Text Message sent (Wed, Th, or Fri)
1	April 26	April 28, or April 29, or April 30
2	May 3	May 5, or May 6, or May 7
3	May 10	May 12, or May 13, or May 14

Overview of study flow



1. In the first stage, addresses were validated by SmartyStreets and phone numbers were validated based on the number of digits and first digit of 7-digit number
2. These sample sizes represent number of households randomized to the text message condition (and respective batch). Trumpia then conducted an additional validation of the numbers for landline vs mobile numbers, which resulted in a smaller number of households being sent text message (n=14,327).

Rationale for stratified randomization in treatment arm assignment

- When you randomize a large sample, different participant characteristics (e.g. gender) are generally balanced across your treatment arms (e.g. there is a similar proportion of women in each group), however imbalance can occur due to chance.
- When we want be confident that certain characteristics are balanced across groups, we can conduct stratified randomization that ensures participants with those characteristics are equally divided between treatment arms.
- We wanted to have a similar proportion of households with at least one Spanish-preferring applicant and at least one Black applicant in both treatment groups to maximize the statistical power to analyze the outcomes for these subgroups.

How we selected our model for analysis

- We used a **logistic regression**, which is BIT's preferred model specification for binary outcomes (e.g., yes vs. no, call vs. no call) when the proportions are very small (<5%) or very large (>95%)
- Because we conducted stratified randomization within the characteristics of race and language preferences and our hypotheses were that the treatments would have different effects by these characteristics, we also adjusted for them in our analysis.
- Where possible, we reported our adjusted results that control for whether or not a household was a Spanish-preferring applicant and whether or not they included at least one Black applicant. Each graph indicates what covariates were used.
- We conducted a **robustness check** to confirm that our results were consistent when controlling for other factors (e.g. when the communication was sent, whether a household included at least one female applicant, etc.).

Recap: Evaluation 1
Postcard vs. SMS for Jobs Training Engagement

Research Question: Is it more effective to disseminate job training information via postcard or SMS text message? Does it differ by key demographics?

Treatment 1:
Postcard from EDD with details about job programs and link to more info

Treatment 2:
SMS text from EDD about job programs and link to more info

Outcomes:

- **Primary:** Calls to 311
- **Exploratory:** Click throughs to Train for Jobs website, referrals via 311, job training registrations, job training completion

Implications for City Hall to Go:

- Learn which low-cost outreach methods are most effective for the 19-55 age group
- Learn if most effective method differs by gender, race, or age
- Drive participation to the “Train for Jobs” Program